



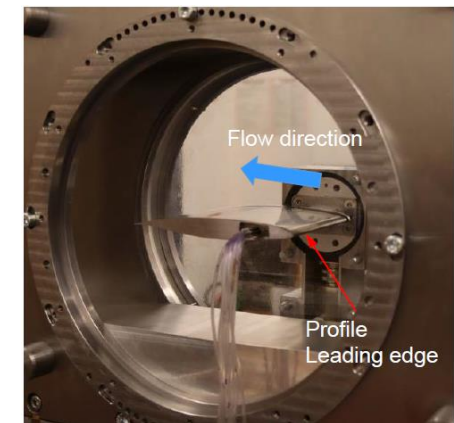
Smart Morphing & Sensing Eu H2020 project

- Experimental – Large Scale prototype wing-flap
 - ✓ +7 % in lift (Take-off)
 - ✓ +4 % in lift (landing)
 - ✓ -7% to -10% in **drag reduction** (landing)
- Numerical :
 - ✓ +6-7% in lift-to-drag (take-off)
 - ✓ +4% in lift and +8% lift-to-drag (landing)
- [F. Auteri et al. \(2022\) Aerospace Science and Technology](#)



Large-Scale A320 SMS prototype (near scale 1) in the wind tunnel of POLIMI

- Experimental transonic Reduced Scale prototype wing-flap
 - ✓ -4 % in drag reduction (cruise)
 - ✓ +3 % in lift-to-drag (cruise)
- Numerical :
 - ✓ +5,5% in lift-to-drag (cruise)
 - ✓ -9% in **drag reduction** (cruise)
- [J. B. Tô et al. \(2019\) Journal of Fluids and Structures](#)



- Numerical – Airbus A320 airplane
 - ✓ +7 % in lift (Take-off)
 - ✓ +1.3 % in lift-to-drag (take-off)

- [A. Marouf et al. 3AF 2020+1, A. Marouf \(PhD\). \(2020\) co-supervised: M. Braza & Y. Hoarau](#)

